

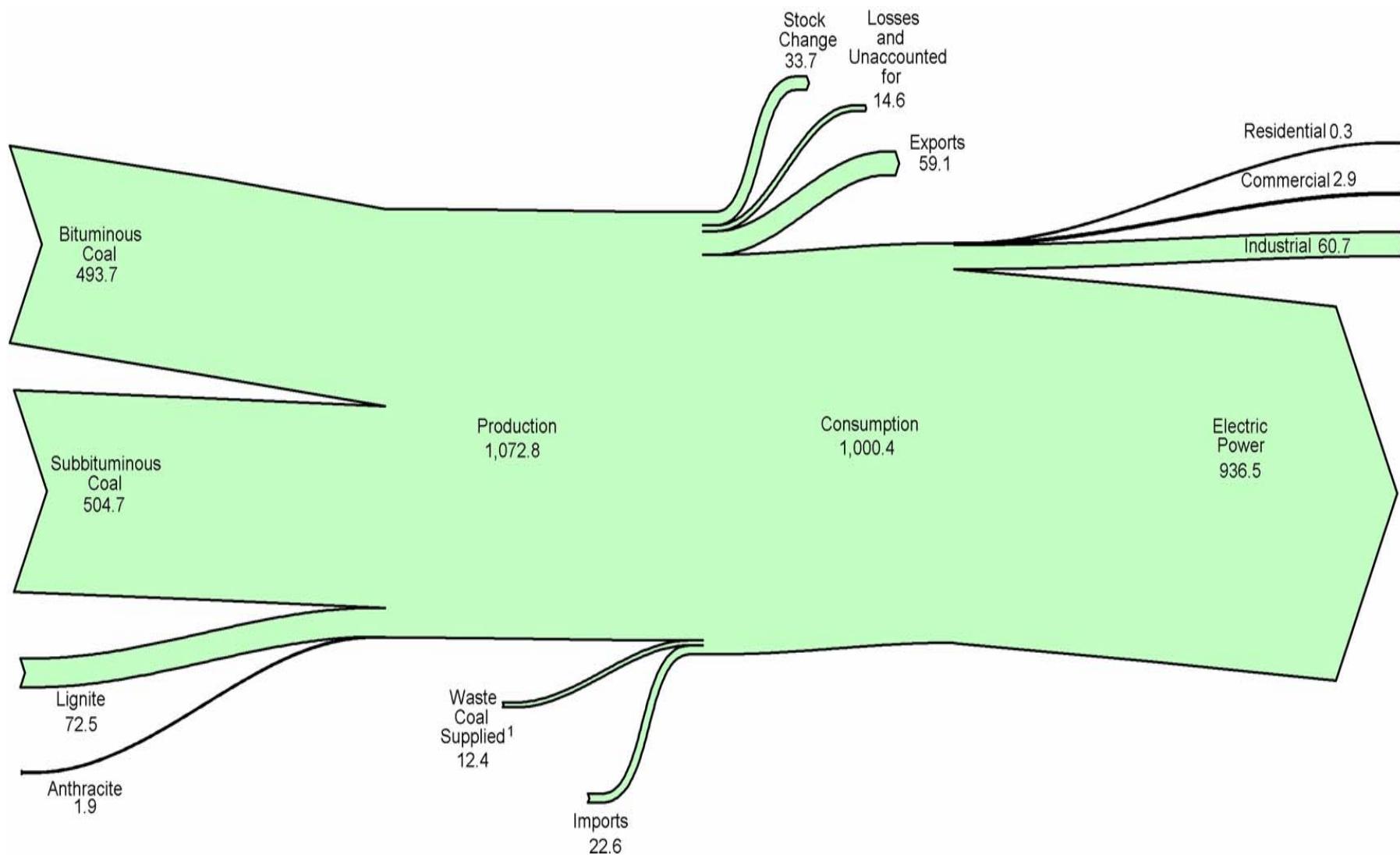
7

Coal



Coal yard, Curtis Bay, Maryland. Source: U.S. Department of Energy.

Figure 7.0 Coal Flow, 2009
 (Million Short Tons)



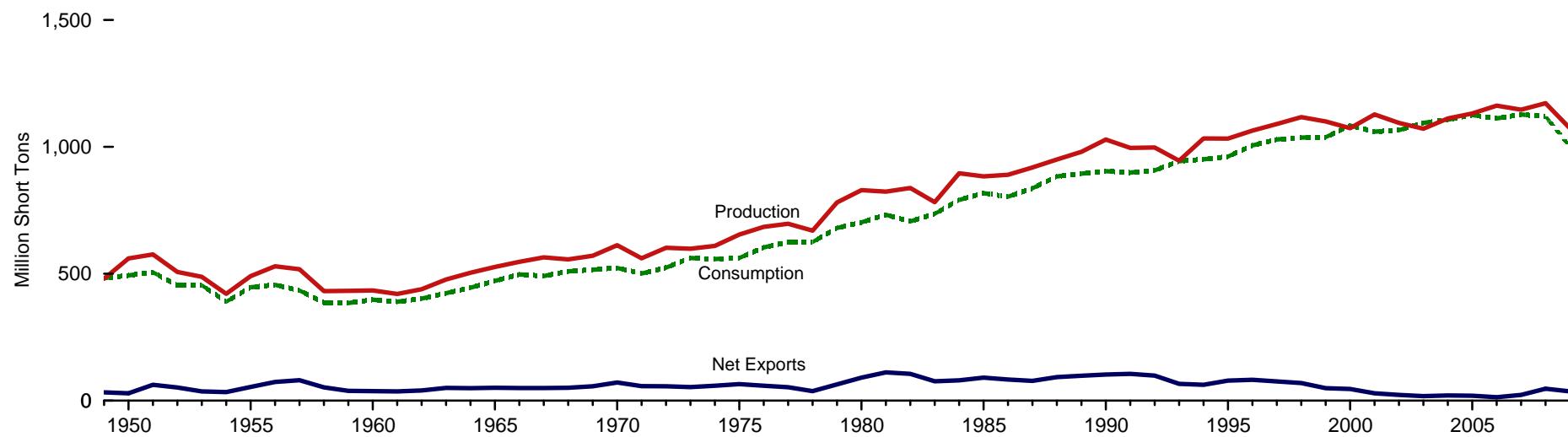
¹ Includes fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste that are consumed by the electric power and industrial sectors.

Notes: • Production categories are estimated; other data are preliminary. • Values are derived from source data prior to rounding for publication. • Totals may not equal sum of components due to independent rounding.

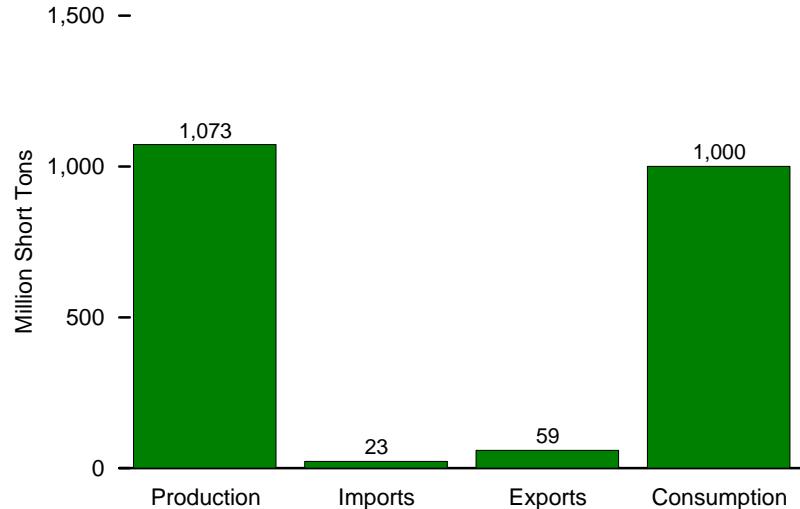
Sources: Tables 7.1, 7.2, and 7.3.

Figure 7.1 Coal Overview

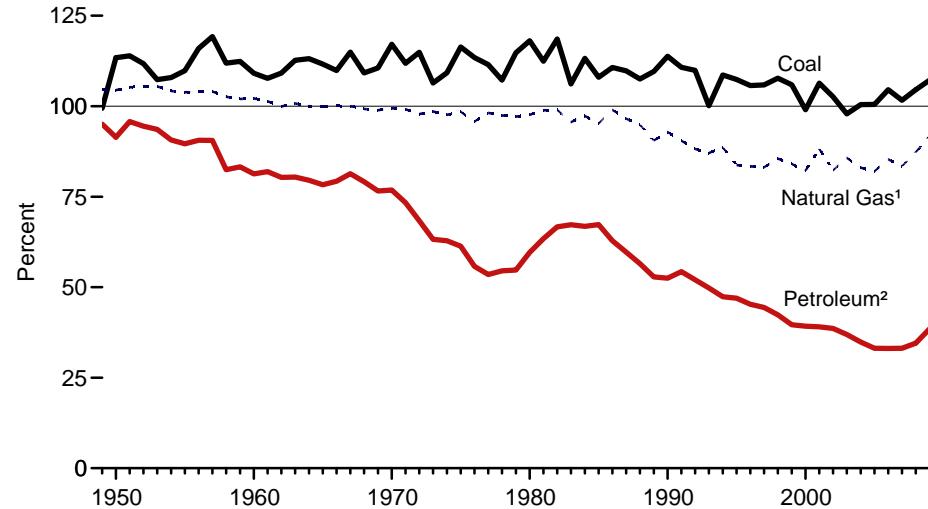
Overview, 1949-2009



Overview, 2009



Production as Share of Consumption by Type of Fossil Fuel, 1949-2009



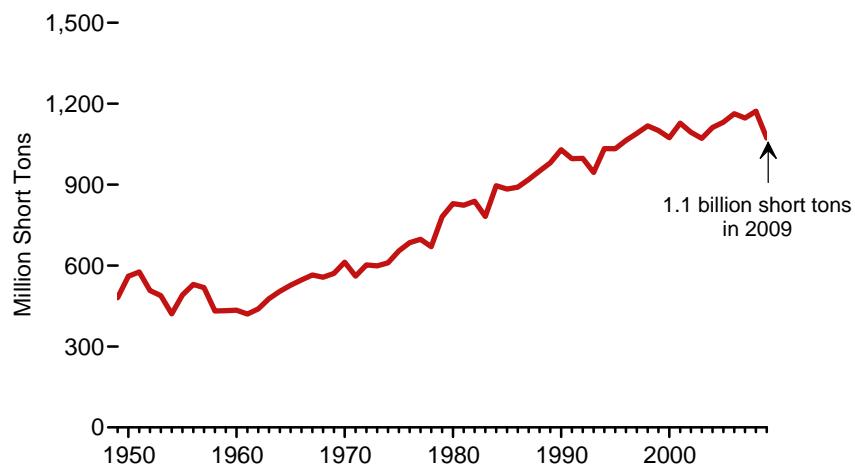
¹ Dry natural gas production as share of natural gas consumption.

² Crude oil and natural gas plant liquids production as share of petroleum products supplied.

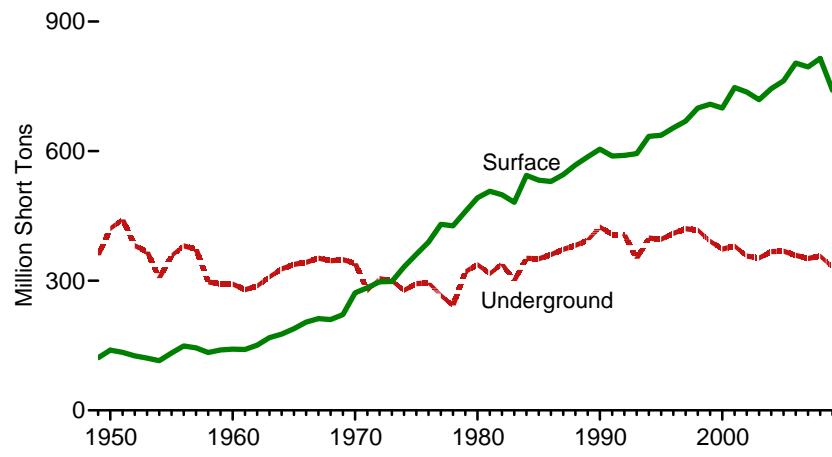
Sources: Tables 5.1, 6.1, and 7.1.

Figure 7.2 Coal Production, 1949-2009

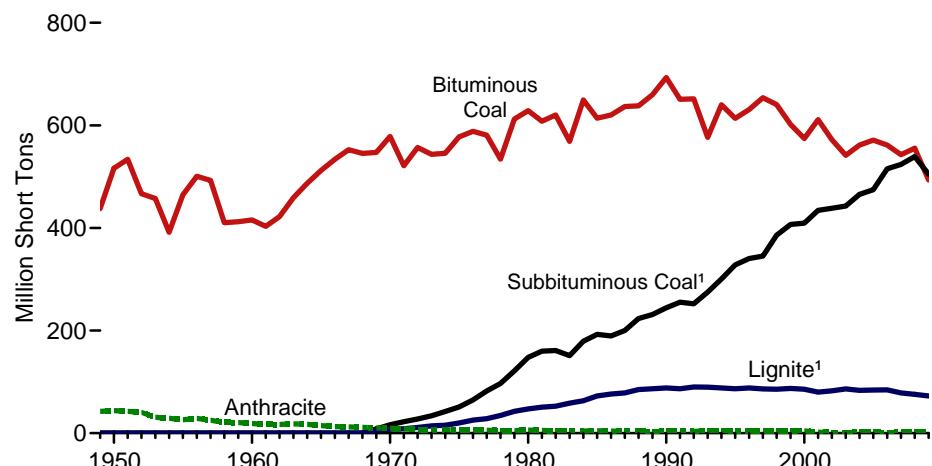
Total



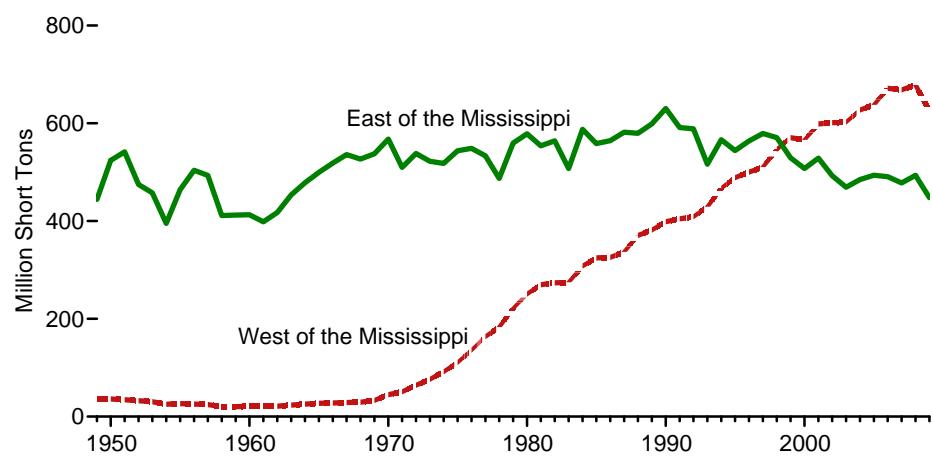
By Mining Method



By Rank



By Location

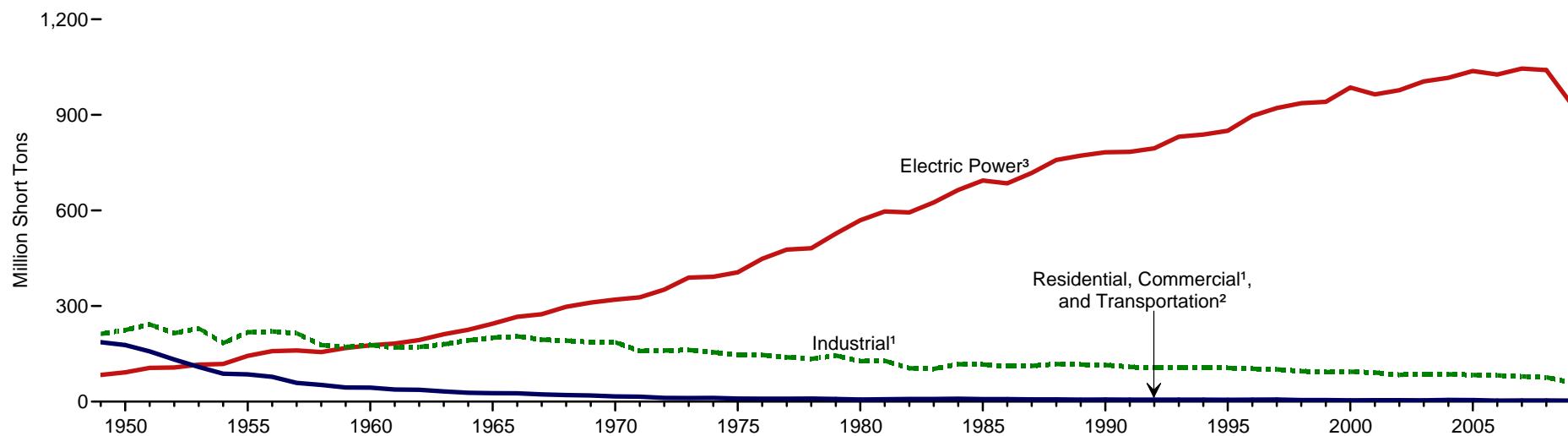


¹ Included in bituminous coal prior to 1969.

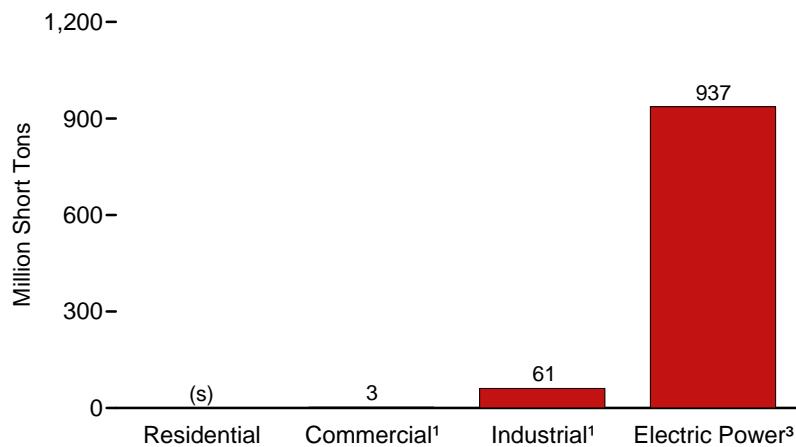
Source: Table 7.2.

Figure 7.3 Coal Consumption by Sector

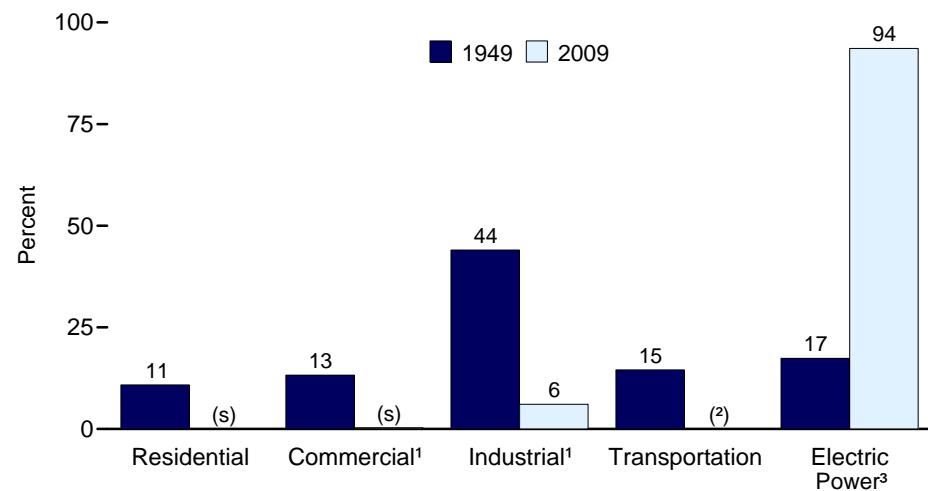
By Sector, 1949-2009



By Sector, 2009



Sector Shares, 1949 and 2009



¹ Includes combined-heat-and-power (CHP) plants and a small number of electricity-only plants.

² For 1978 forward, small amounts of transportation sector use are included in "Industrial."

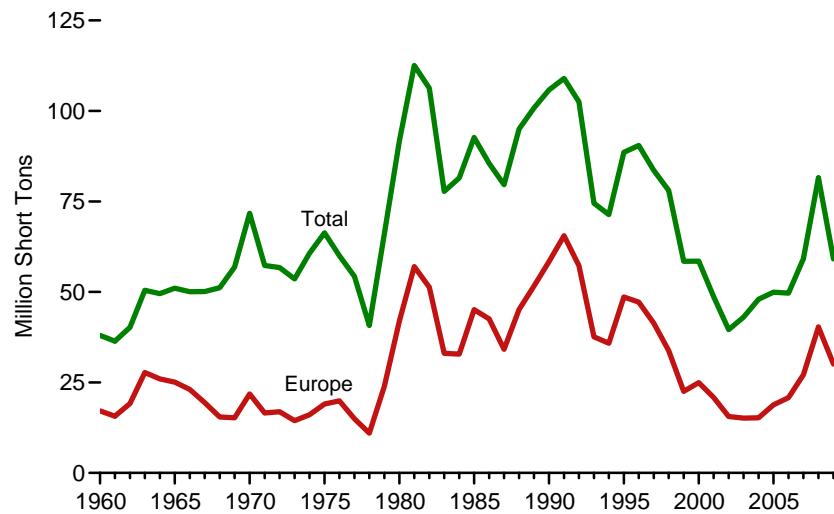
³ Electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

(s)=Less than 0.5.

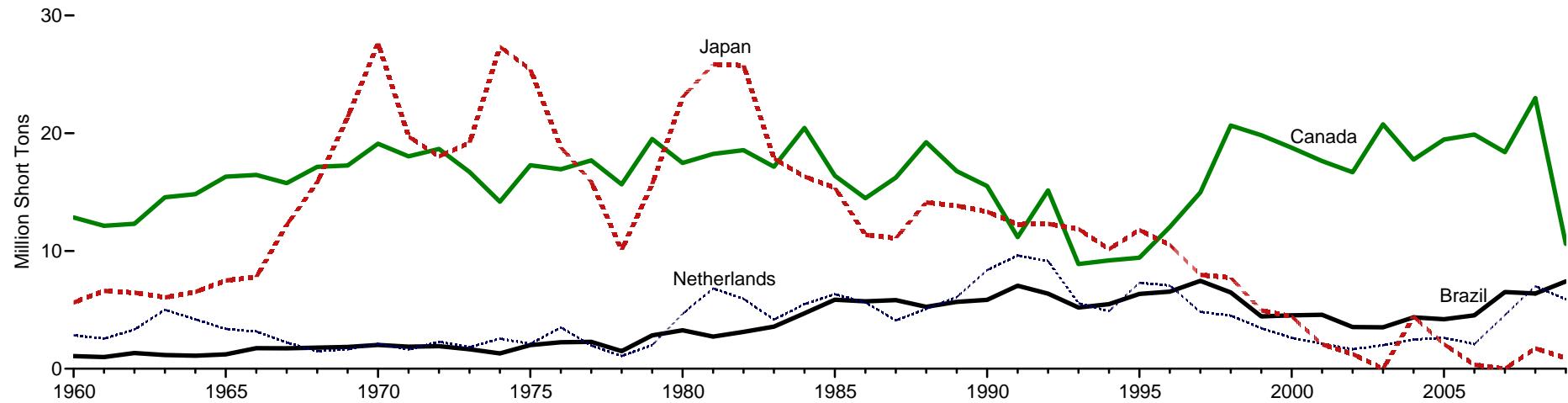
Source: Table 7.3.

Figure 7.4 Coal Exports by Country of Destination

Total and Europe, 1960-2009



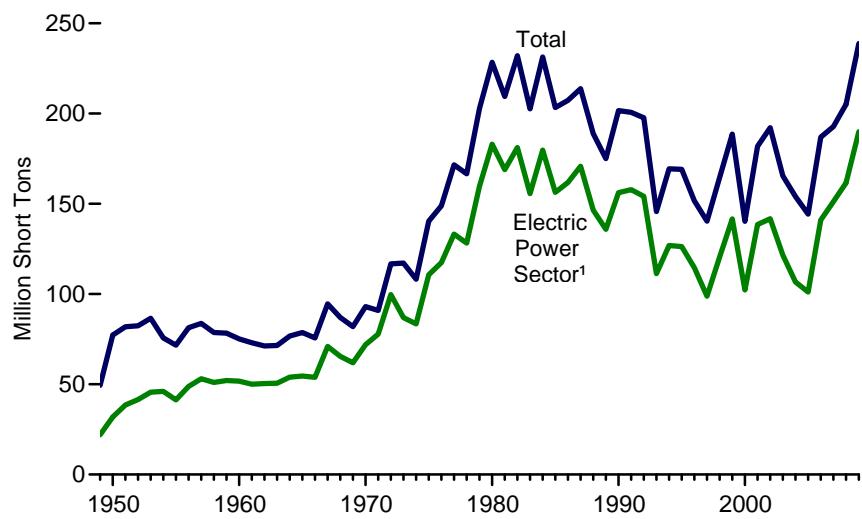
By Selected Country, 1960-2009



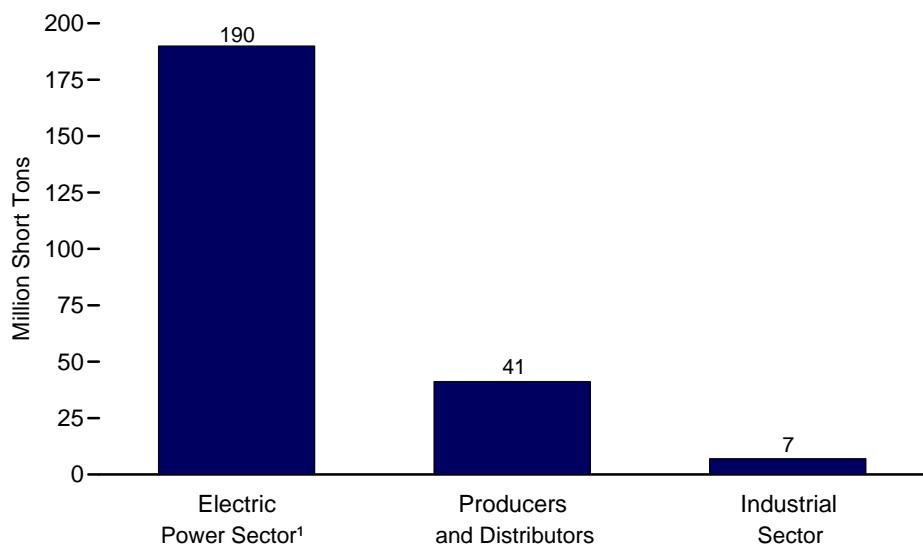
Source: Table 7.4.

Figure 7.5 Coal Stocks

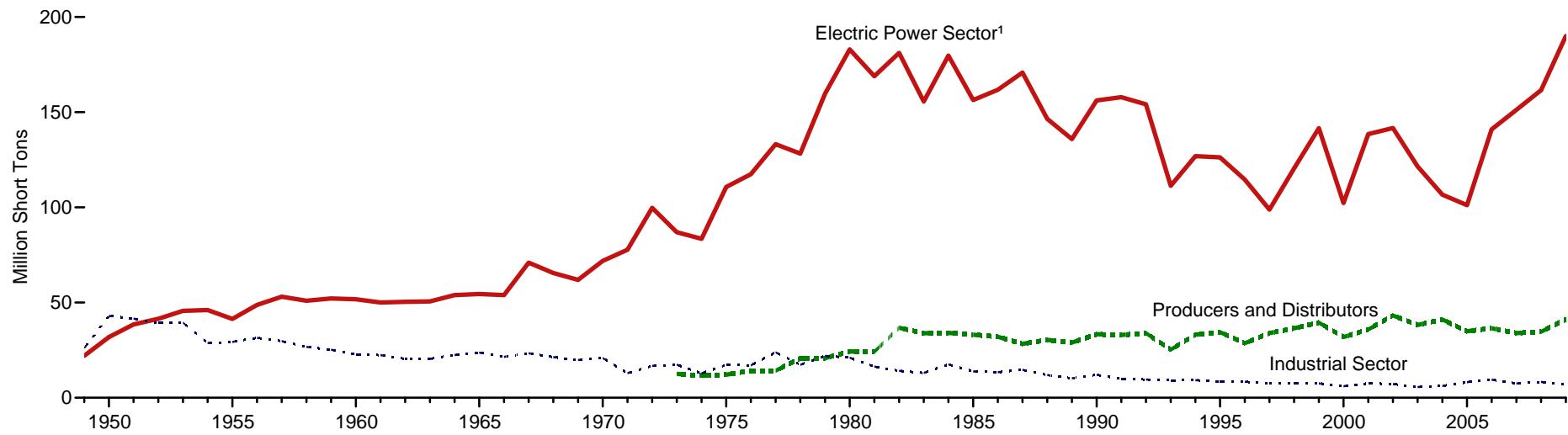
Total and Electric Power Sector Stocks, 1949-2009



By Holding Entity, 2009



By Holding Entity, 1949-2009



¹ Electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

Note: Stocks are at end of year.
Source: Table 7.5.

Table 7.5 Coal Stocks by Sector, Selected Years, 1949-2009
 (Million Short Tons)

Year	Producers and Distributors	Residential and Commercial Sectors	Consumers					Total	
			Industrial Sector			Transportation Sector	Electric Power Sector ²		
			Coke Plants	Other ¹	Total				
1949	NA	1.4	10.0	16.1	26.0	(³)	22.1	49.5	
1950	NA	2.5	16.8	26.2	43.0	(³)	31.8	77.3	
1955	NA	1.0	13.4	15.9	29.3	(³)	41.4	71.7	
1960	NA	.7	11.1	11.6	22.8	(³)	51.7	75.2	
1965	NA	.4	10.6	13.1	23.8	(³)	54.5	78.6	
1970	NA	.3	9.0	11.8	20.8	(³)	71.9	93.0	
1971	NA	.3	7.3	5.6	12.9	(³)	77.8	91.0	
1972	NA	.3	9.1	7.6	16.7	(³)	99.7	116.8	
1973	12.5	.3	7.0	10.4	17.4	(³)	87.0	104.6	
1974	11.6	.3	6.2	6.6	12.8	(³)	83.5	96.6	
1975	12.1	.2	8.8	8.5	17.3	(³)	110.7	128.3	
1976	14.2	.2	9.9	7.1	17.0	(³)	117.4	134.7	
1977	14.2	.2	12.8	11.1	23.9	(³)	133.2	157.3	
1978	20.7	.4	8.3	9.0	17.3	NA	128.2	145.9	
1979	20.8	.3	10.2	11.8	21.9	NA	159.7	182.0	
1980	24.4	NA	9.1	12.0	21.0	NA	183.0	204.0	
1981	24.1	NA	6.5	9.9	16.4	NA	168.9	185.3	
1982	36.8	NA	4.6	9.5	14.1	NA	181.1	195.3	
1983	33.9	NA	4.3	8.7	13.1	NA	155.6	168.7	
1984	34.1	NA	6.2	11.3	17.5	NA	179.7	197.2	
1985	33.1	NA	3.4	10.4	13.9	NA	156.4	170.2	
1986	32.1	NA	3.0	10.4	13.4	NA	161.8	175.2	
1987	28.3	NA	3.9	10.8	14.7	NA	170.8	185.5	
1988	30.4	NA	3.1	8.8	11.9	NA	146.5	158.4	
1989	29.0	NA	2.9	7.4	10.2	NA	135.9	146.1	
1990	33.4	NA	3.3	8.7	12.0	NA	156.2	168.2	
1991	33.0	NA	2.8	7.1	9.8	NA	157.9	167.7	
1992	34.0	NA	2.6	7.0	9.6	NA	154.1	163.7	
1993	25.3	NA	2.4	6.7	9.1	NA	111.3	120.5	
1994	33.2	NA	2.7	6.6	9.2	NA	126.9	136.1	
1995	34.4	NA	2.6	5.7	8.3	NA	126.3	134.6	
1996	28.6	NA	2.7	5.7	8.4	NA	114.6	123.0	
1997	34.0	NA	2.0	5.6	7.6	NA	98.8	106.4	
1998	36.5	NA	2.0	5.5	7.6	NA	120.5	128.1	
1999	39.5	NA	1.9	5.6	7.5	NA	141.6	149.1	
2000	31.9	NA	1.5	4.6	6.1	NA	102.3	108.4	
2001	35.9	NA	1.5	6.0	7.5	NA	138.5	146.0	
2002	43.3	NA	1.4	5.8	7.2	NA	141.7	148.9	
2003	38.3	NA	.9	4.7	5.6	NA	121.6	127.2	
2004	41.2	NA	1.3	4.8	6.2	NA	106.7	112.9	
2005	35.0	NA	2.6	5.6	8.2	NA	101.1	109.3	
2006	36.5	NA	2.9	6.5	9.4	NA	141.0	150.4	
2007	34.0	NA	1.9	5.6	7.6	NA	151.2	158.8	
2008	R34.7	.5	2.3	6.0	8.3	NA	R161.6	R170.4	
2009 ^P	E41.3	.5	2.0	5.1	7.1	NA	190.0	197.6	
								238.8	

¹ Through 1977, data are for stocks held by the manufacturing and transportation sectors. Beginning in 1978, data are for stocks held at manufacturing plants only.

² Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1998, data are for electric utilities only; beginning in 1999, data are for electric utilities and independent power producers.

³ Included in "Industrial Sector Other."

R=Revised. P=Preliminary. E=Estimate. NA=Not available.

Notes: • Stocks are at end of year. • Totals may not equal sum of components due to independent rounding.

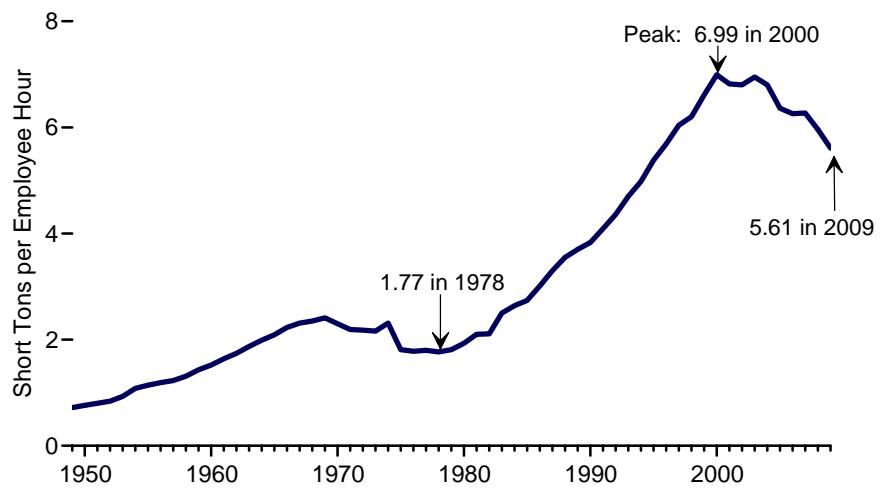
Web Pages: • For all data beginning in 1949, see <http://www.eia.gov/emeu/aer/coal.html>. • For related information, see <http://www.eia.gov/fuelcoal.html>.

Sources: **Electric Power Sector:** Table 8.8. **All Other Data:** • 1949-1975—Bureau of Mines, Minerals Yearbook, "Coal—Bituminous and Lignite" and "Coal—Pennsylvania Anthracite" chapters.

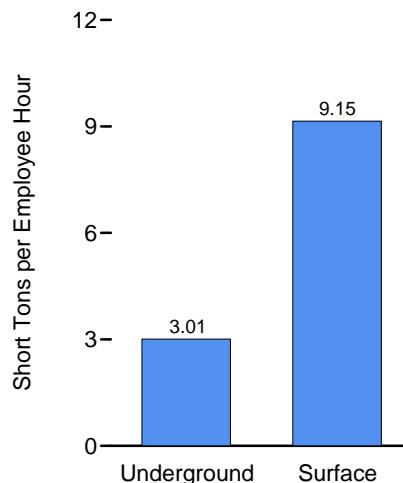
• 1976—U.S. Energy Information Administration (EIA), Energy Data Reports, Coal—Bituminous and Lignite in 1976 and Coal—Pennsylvania Anthracite 1976. • 1977 and 1978—EIA, Energy Data Reports, Coal—Pennsylvania Anthracite 1977; 1978, and Weekly Coal Report. • 1979—EIA, Energy Data Report, Weekly Coal Report. • 1980-2002—EIA, Quarterly Coal Report (QCR) October-December, quarterly reports. • 2003 forward—EIA, QCR October-December 2009 (April 2010), Table 32.

Figure 7.6 Coal Mining Productivity

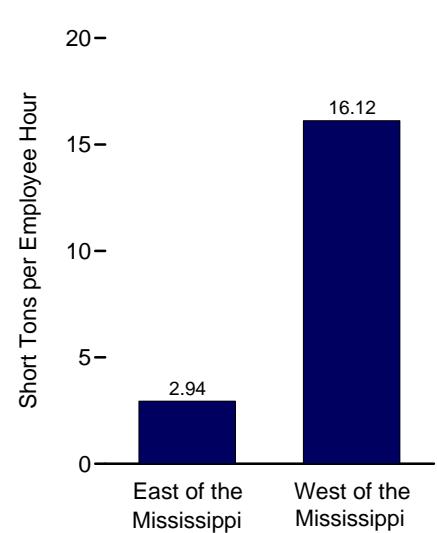
Total, 1949-2009



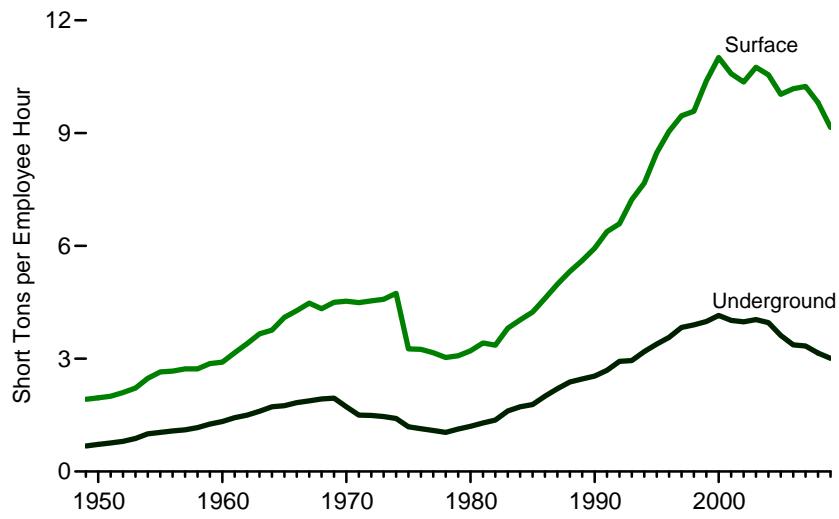
Mining Methods, 2009



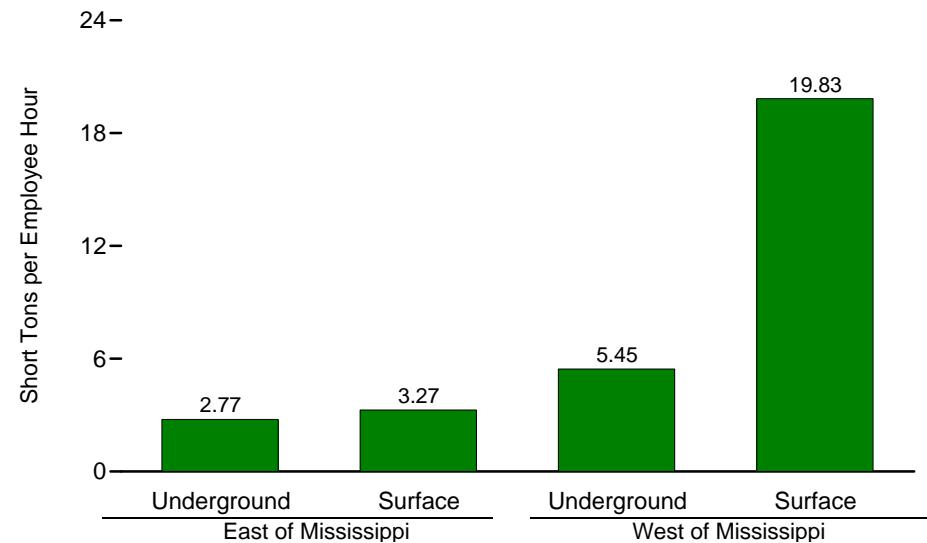
Location, 2009



Mining Method,¹ 1949-2009



By Region and Mining Method, 2009



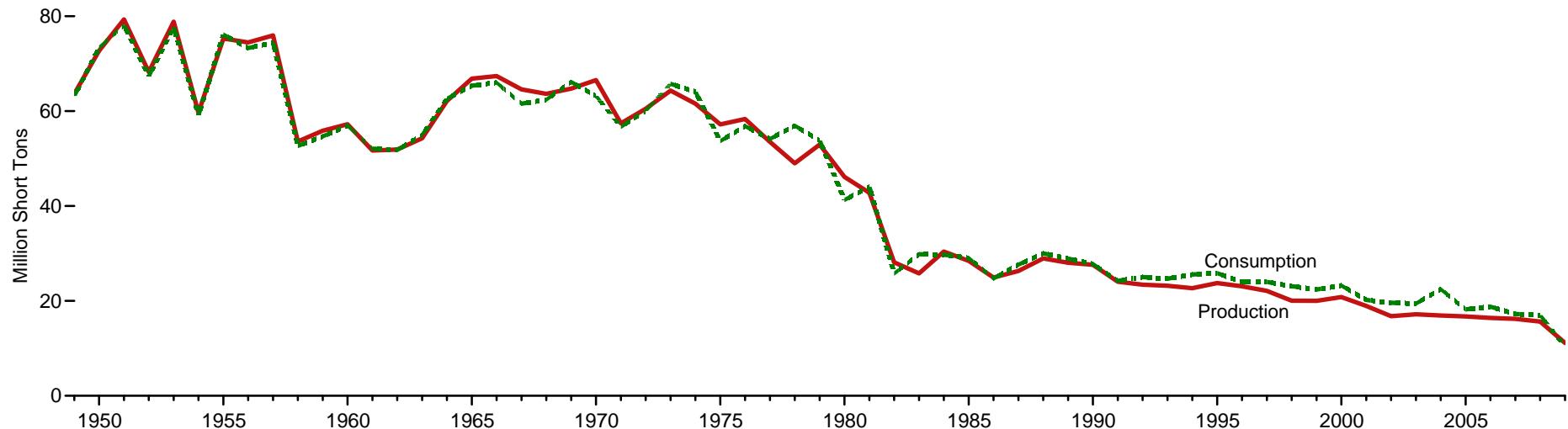
¹ For 1979 forward, includes all coal; prior to 1979, excludes anthracite.

Note: Beginning in 2001, surface mining includes a small amount of refuse recovery.

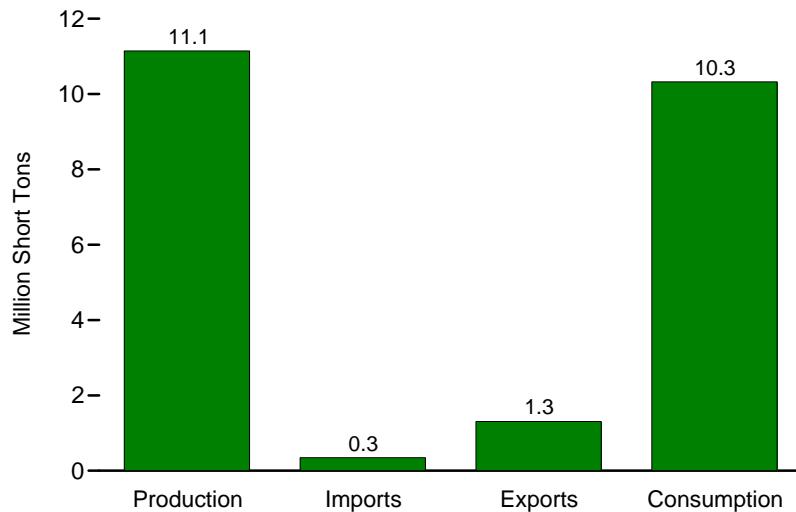
Source: Table 7.6.

Figure 7.7 Coke Overview

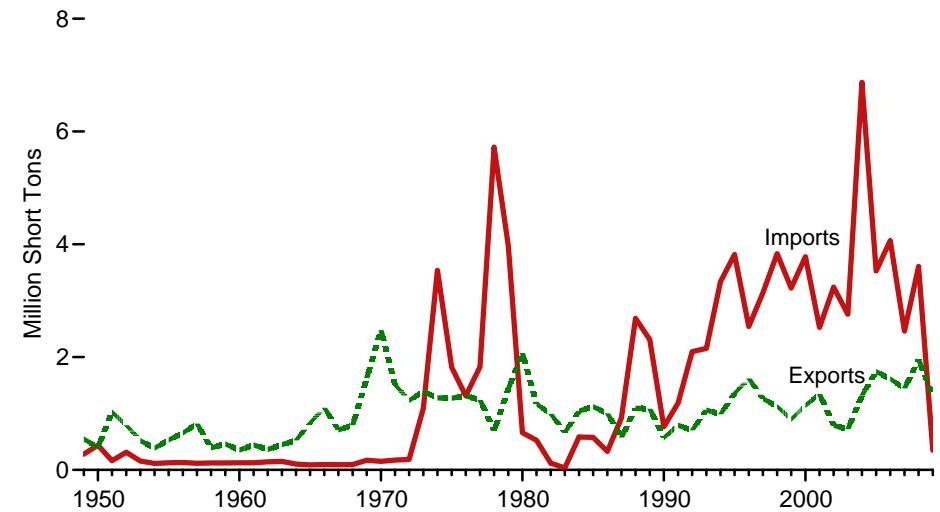
Production and Consumption, 1949-2009



Overview, 2009



Trade, 1949-2009



Source: Table 7.7.

Table 7.7 Coke Overview, Selected Years, 1949-2009
 (Million Short Tons)

Year	Production	Trade			Stock Change ²	Consumption ³
		Imports	Exports	Net Imports ¹		
1949	63.6	0.3	0.5	-0.3	0.2	63.2
1950	72.7	.4	.4	(s)	-.7	73.4
1955	75.3	.1	.5	-.4	-1.2	76.1
1960	57.2	.1	.4	-.2	.1	56.9
1965	66.9	.1	.8	-.7	.7	65.4
1970	66.5	.2	2.5	-2.3	1.0	63.2
1971	57.4	.2	1.5	-1.3	-.6	56.7
1972	60.5	.2	1.2	-1.0	-.6	60.0
1973	64.3	1.1	1.4	-.3	-1.7	65.8
1974	61.6	3.5	1.3	2.3	-.2	64.1
1975	57.2	1.8	1.3	.5	4.1	53.7
1976	58.3	1.3	1.3	(s)	1.5	56.8
1977	53.5	1.8	1.2	.6	(s)	54.1
1978	49.0	5.7	.7	5.0	-2.9	56.9
1979	52.9	4.0	1.4	2.5	1.7	53.8
1980	46.1	.7	2.1	-1.4	3.4	41.3
1981	42.8	.5	1.2	-.6	-1.9	44.0
1982	28.1	.1	1.0	-.9	1.5	25.8
1983	25.8	(s)	.7	-.6	-4.7	29.9
1984	30.4	.6	1.0	-.5	.2	29.7
1985	28.4	.6	1.1	-.5	-1.2	29.1
1986	24.9	.3	1.0	-.7	-.5	24.7
1987	26.3	.9	.6	.3	-1.0	27.7
1988	28.9	2.7	1.1	1.6	.5	30.0
1989	28.0	2.3	1.1	1.2	.3	28.9
1990	27.6	.8	.6	.2	(s)	27.8
1991	24.0	1.2	.8	.4	.2	24.2
1992	23.4	2.1	.7	1.4	-.2	25.0
1993	23.2	2.2	1.1	1.1	-.4	24.7
1994	22.7	3.3	1.0	2.4	-.5	25.6
1995	23.7	3.8	1.4	2.5	.4	25.8
1996	23.1	2.5	1.6	.9	(s)	24.0
1997	22.1	3.1	1.3	1.9	(s)	24.0
1998	20.0	3.8	1.1	2.7	-.4	23.1
1999	20.0	3.2	.9	2.3	-.1	22.4
2000	20.8	3.8	1.1	2.6	.2	23.2
2001	18.9	2.5	1.3	1.2	-.1	20.2
2002	16.8	3.2	.8	2.5	-.4	19.6
2003	17.2	2.8	.7	2.0	-.2	19.4
2004	16.9	6.9	1.3	5.6	(s)	22.5
2005	16.7	3.5	1.7	1.8	.3	18.2
2006	16.4	4.1	1.6	2.5	.1	18.8
2007	16.2	2.5	1.4	1.0	-.1	17.3
2008	15.6	3.6	2.0	1.6	.3	17.0
2009 ^p	11.1	.3	1.3	-1.0	-.1	10.3

¹ Net imports equal imports minus exports. Minus sign indicates exports are greater than imports.

² Producer and distributor stocks at end of year. A negative value indicates a decrease in stocks; a positive value indicates an increase.

³ "Consumption" is calculated as the sum of production and imports minus exports and stock change.

P=Preliminary. (s)=Less than 0.05 million short tons.

Note: Totals may not equal sum of components due to independent rounding.

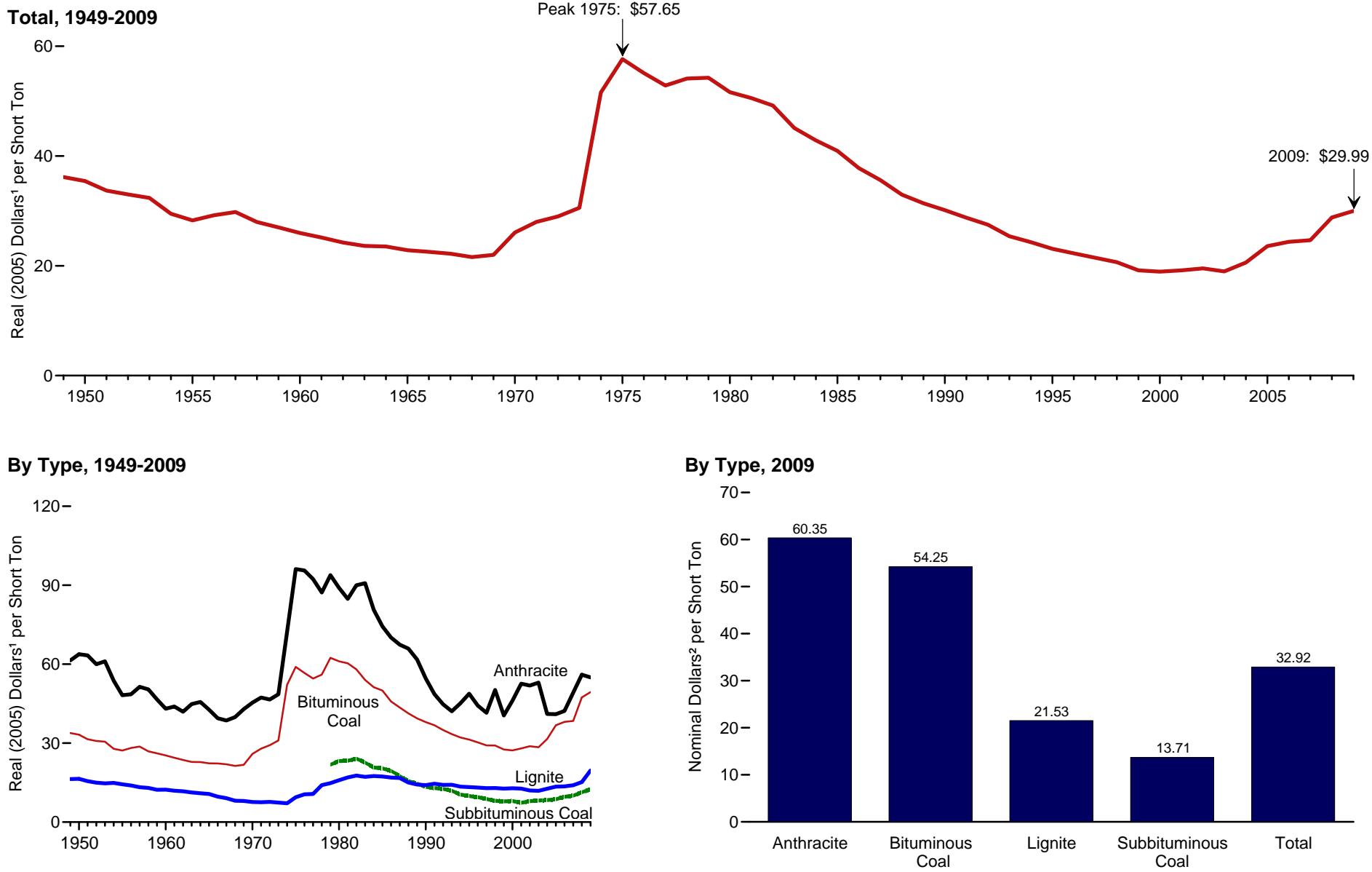
Web Pages: • For all data beginning in 1949, see <http://www.eia.gov/emeu/aer/coal.html>.

• For related information, see <http://www.eia.gov/fuelcoal.html>.

Sources: • 1949-1975—Bureau of Mines, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter.

• 1976-1980—U.S. Energy Information Administration (EIA), Energy Data Report, *Coke and Coal Chemicals*, annual reports. • 1981-2002—EIA, *Quarterly Coal Report (QCR) October-December*, quarterly reports. • 2003 forward—EIA, *QCR October-December 2009* (April 2010), Table ES-2.

Figure 7.8 Coal Prices



¹ In chained (2005) dollars, calculated by using gross domestic product implicit price deflators in Table D1. See "Chained Dollars" in Glossary.

² See "Nominal Dollars" in Glossary.
Source: Table 7.8.

Coal

Note 1. Coal Consumption. Data in this report on the consumption of bituminous coal, sub-bituminous coal, lignite, anthracite, and waste coal are developed primarily from consumption data reported in surveys. Included are data reported by all electric power companies and coke plant companies. Data on coal consumption by all industrial and manufacturing establishments are based on consumption data obtained quarterly from coal users. Beginning in 2008, data on coal consumption by the residential and commercial sectors are based on data received on Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users." Prior to 2008, data on coal consumption by the residential and commercial sectors are based on distribution data obtained annually from coal distributors. Included in each sector's data are the following: Residential and Commercial Sectors—commercial and institutional establishments including military bases, universities, and various State facilities; Industrial Sector—consumption at manufacturing plants, coking plants, and coal preparation plants; Electric Power Sector (electric utilities and independent power producers)—consumption for electric generation and useful thermal output at electricity-only and CHP plants within the North American

Industry Classification System (NAICS) 22 category, whose primary business is to sell electricity, or electricity and heat, to the public. There are no data for the Transportation Sector.

Note 2. Residential and Commercial Coal Consumption Estimates. Coal consumption by the residential and commercial sectors is reported to the U.S. Energy Information Administration (EIA) for the two sectors combined; EIA estimates the amount consumed by the sectors individually. To create the estimates, it is first assumed that an occupied coal-heated housing unit consumes fuel at the same Btu rate as an oil-heated housing unit. Then, for the years in which data are available on the number of occupied housing units by heating source (1950, 1960, 1970, 1973–1981, and subsequent odd-numbered years; see Table 2.7), residential consumption of coal is estimated by the following steps: a ratio is created of the number of occupied housing units heated by coal to the number of housing units heated by oil; that ratio is then multiplied by the Btu quantity of oil consumed by the residential sector to derive an estimate of the Btu quantity of coal consumed by the residential sector; and, finally, the amount estimated as the residential sector consumption is subtracted from the residential and commercial sectors' combined consumption to derive the commercial sector's estimated consumption. The 1950 share is applied to 1949, and the other missing years' shares are interpolated.